

Amendment and Reply dated April 19, 2005 for X16699\_US  
09/748,739 - Lockridge & Watkins

**Amendments to the Claims**

1. (Currently amended) A butyrylcholinesterase variant comprising an amino acid sequence comprising ~~at least 95% sequence identity to a sequence of amino acid residues 1 or about 29 through 602, inclusive, of the amino acid sequence shown as SEQ ID NO:2,~~ wherein said variant has ~~tryptophane~~ tryptophan at amino acid position ~~328~~ 356.
2. (Currently amended) The butyrylcholinesterase variant of claim 1, having a 15-fold increase in cocaine hydrolysis activity compared to human butyrylcholinesterase.
- 3-39. (Withdrawn).

See page 25 of this response for a listing of the current claims without markings.

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**Listing of Current Claims Without Markings**

1. A butyrylcholinesterase variant comprising an amino acid sequence comprising a sequence of amino acid residues 1 or 29 through 602, inclusive, of the amino acid sequence shown as SEQ ID NO:2, wherein said variant has tryptophan at amino acid position 356.
2. The butyrylcholinesterase variant of claim 1, having a 15-fold increase in cocaine hydrolysis activity compared to human butyrylcholinesterase.